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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/917,782 | 07/31/2001 | Richard Arthur Bickers | 30970032-1 | 1444 |

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| EXAMINER |
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PHAM, KHANH B

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| ART UNIT | PAPER NUMBER |
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2167

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/917,782 | BICKERS ET AL. | |
| | Examiner | Art Unit | |
| | Khanh B. Pham | 2167 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 08 February 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3-6,8-13 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,3-6,8-13 and 16-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.
2. Applicant's submission filed on February 8, 2005 has been entered. Claims 21-44 have been canceled. Claims 1, 3, 5, 6, 9-11, 16-20 have been amended. Claims 1, 3-6, 8-13, 16-20 are pending in this Office Action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1, 3-6, 8-13, 16-20** are rejected under 35 U.S.C. 102(e) as being anticipated by Shaath et al. (US 6,546,384 B2), hereinafter “Shaath”.

As per claim 1, Shaath teaches a method of centralized data position information storage and utilization comprising the steps of:

- “arranging a byte stream of data into partitioned logical data” at Figs. 3e-3h;
- “storing data position information relating to said logical data in a reserve storage area” at Col. 5 lines 15-16 and Col. 5 line 66 to Col. 6 line 4;
- “transferring all said information from said reserve storage area only to a centralized storage area, wherein said centralized storage area is configured to store said information relating to substantially all said partitioned logical data” at Col. 5 lines 1-17;
- “locating target data that is part of said logical data by applying a search algorithm to said data position information stored in said centralized storage area, said search algorithm being configured to locate said target data” at Col. 9 line 55 to Col. 10 line 42;

As per claim 3, Shaath teaches the method as claimed in claim 1, wherein “said logical data comprises: records and filemarks, wherein said centralized storage area stores data position information relating to said records and said filemarks in a data table, the locating step including reading from the data table the stored position information relating to said records and said filemarks” at Col. 7 lines 37-49.

As per claim 4, Shaath teaches the method as claimed in claim 1, wherein “said centralized storage area stores logical data position information relating to a plurality of selected logical data groups, the locating step including reading the stored logical data

position information relating to the plurality of selected logical data groups" at Figs. 3a-3h and Col. 6 lines 21-25.

As per claim 5, Shaath teaches a method of storing and utilizing data position information on a tape data storage device, said method comprising the steps of:

- "arranging a byte stream of data into partitioned logical data" at Figs. 3e-3h;
- "recording said logical data onto a length of tape" at Figs. 3e-3h;
- "storing data position information relating to said logical data in a reserve storage area" at Col. 5 lines 15-16 and Col. 5 line 66 to Col. 6 line 4;
- "transferring all said information from said reserve storage area only to a centralized storage area located within said tape device, wherein said centralized storage area is configured to store said information relating to substantially all said partitioned logical data" at Col. 5 lines 1-17;
- "locating target data on said tape by applying a search algorithm to said data position information stored in the centralized storage area, said search algorithm being configured to locate said target data" at Col. 9 line 55 to Col. 10 line 42;
- "determining the required transporting of said logical data relative to a read head to enable said target data to be read, said target data being part of said logical data" at Fig. 9.

- “reading said target data by using the read head when the logical data is at the read head” at Col. 15 lines 5-15.

As per claim 6, Shaath teaches the method as claimed in claim 5 wherein the step of transferring said data position information comprises:

- transferring said information to a data table within said centralized storage area” at Col. 6 lines 21-25;
- “arranging said information within said data table so as to minimize the time period taken to locate said target data on said tape when utilizing said information” at Col. 5 lines 5-17.

As per claim 8, Shaath teaches the method as claimed in claim 5, wherein said data position information in said centralized storage area relates to a plurality of selected data groups, said data groups being distributed along the length of the tape” at Figs. 3a-3h and Col. 5 lines 1-17.

As per claim 9, Shaath teaches the method as claimed in claim 5 further comprising the step of: transferring said data position information in said centralized storage area to a reserve storage area” at Col. 6 lines 21-25.

As per claim 10, Shaath teaches a data position information storage and utilization device comprising:

- “partitioned logical data distributed across a length of tape” at Fig. 1;

- “a reserve storage area storing data position information relating to said logical data” at Col. 5 line 55 to Col. 6 line 20;
- “a centralized storage area configured to store said information received from said reserve storage area, said centralized storage area being configured to store information relating to substantially all said partitioned logical data” at Col. 5 lines 1-17;
- “a processing arrangement for transferring all said information from said reserve storage area only to a centralized storage area” at Col. 5 lines 5-17
- “a search algorithm for determining the location of target data on said tape” at Col. 9 line 55 to Col. 10 line 42;
- “and a read head configured to read said logical data on said tape; said device being operable, in response to a request for said target data, to locate said target data on said tape in response to (a) information in said centralized storage area and (b) the target data location determined by the search algorithm, and to read said target data by using said read head” at Col. 15 lines 5-15 and Fig. 9, element 220.

As per claim 11, Shaath teaches the device as claimed in claim 10 wherein “said reserve storage area is located on at least one portion of said tape” at Fig. 2, element 22.

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As per claim 12, Shaath teaches the device as claimed in claim 10, wherein “said reserve storage area is in a cartridge memory” at Col. 1 lines 63-67.

As per claim 13, Shaath teaches the device as claimed in claim 10, wherein “said centralized storage area is located substantially within a tape drive including said read head” at Col. 5 lines 16-17.

As per claim 16, Shaath teaches the method of claim 1, wherein “the reserve storage area is volatile memory external to the tape, and erasing the volatile memory in response to the tap being removed from a device for reading the tape” at Col. 1 lines 63-67.

As per claim 17, Shaath teaches the device of claim 10, wherein “the reserve storage area is volatile memory external to the tape” at Col. 1 lines 63-67.

As per claims 18, 19, Shaath teaches the method of claim 5, wherein the tape includes plural parallel tracks, and the algorithm derives a physical target position for a track different from the track where the head is positioned in response to indications of logical current and logical target positions and causes the head to moved physical target position without going to a beginning of wrap or an end of wrap” at Col. 14 line 56 to Col. 15 line 16.

As per claim 20, Shaath teaches the device of claim 19, wherein “the reserve storage area is volatile memory external to the tape” at Col. 1 lines 63-67.

Response to Arguments

5. Applicant's arguments filed February 8, 2005 have been fully considered but they are not persuasive. The examiner respectfully traverses applicant's arguments.

Applicant argued at page 9 that Shaath does not teach: "said centralized storage area being configured to store said information relating to substantially all said partitioned logical data" because "the index information in Shaath is distributed over many indexes." On the contrary, Shaath teaches a centralized storage area at the end of the tape to store information relating to substantially all said partitioned logical data at Col. 5 lines 5-17 recited below:

"Thus index portions are quickly located on the tape and compiled to assemble a complete index. Preferably, when a tape is filed a **complete master index is stored at the end of the tape**"

Therefore, even the index information in Shaath is distributed over many indexes, as noted by applicant at page 9, Shaath also recognizes that "this is not ideal as it represents cost in both time and storage" (Col. 5 lines 3-5), and then teaches a preferred embodiment where "the complete master index" is stored in a centralized storage area at "the end of the tape". The "complete master index" of course contains "information relating to substantially all said partitioned logical data" as claimed.

In light of the foregoing arguments, the 35 U.S.C 102 rejection is hereby sustained.

Conclusion

6. The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

If a reference indicated as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Craney whose telephone number is (571) 272-3574 for faster service.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh B. Pham whose telephone number is (571) 272-4116. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khanh B. Pham

Examiner
Art Unit 2167

March 1, 2005

Khampham